Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010	)	WT Docket No. 96-86

REPLY COMMENTS OF ERICSSON INC., INTEL CORPORATION, NOKIA INC. AND TEXAS INSTRUMENTS INCORPORATED (THE "HIGH TECH COMPANIES")

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Ericsson Inc., Intel Corporation, Nokia Inc., and Texas Instruments Incorporated (collectively, the "High Tech Companies") submit these reply comments in the above-referenced proceeding. The High Tech Companies agree with numerous other commenters that the current Upper 700 MHz band plan should be modified to accommodate broadband technologies in the public safety allocation. As the Commission implements this consensus, it is imperative that the rules, including the band plan, are technologically neutral. The High Tech Companies urge the Commission to implement a flexible band plan for the 700 MHz public safety wideband spectrum that accommodates 5 MHz broadband technologies, so that public safety entities will be able to incorporate broadband into their networks.

I. The Commission Should Modify the Band Plan to Accommodate Broadband

In the initial round of comments responding to the *Public Safety Broadband NPRM,* public safety and commercial entities alike overwhelmingly supported modification of the band plan for the public safety allocation in the Upper 700 MHz band to accommodate broadband

technologies.[1] The High Tech Companies agree with the commenters and urge the Commission to modify the existing band plan to accommodate broadband technologies in the public safety spectrum.

Broadband is the future of communications, and public safety agencies must not be deprived of the opportunity to utilize broadband technologies. The Commission has identified benefits that broadband would enable for public safety agencies, such as "delivery of rapid warnings and messages pertaining to criminal activity, including AMBER Alerts; video surveillance during emergency incidents; real-time text messaging and e-mail; delivery of high resolution digital images; and the ability to obtain location and status information of personnel and equipment in the field."[2] Broadband also would make possible "applications that public safety has identified as critical for the immediate future," including those enabling public safety agencies to "share nationwide alerts, images, data files or streaming video of immediate security threats, transmit and receive video, images and/or data to critical off-site subject experts, transfer biometric information and allow two way internet and intranet access to ensure real-time decision making."[3]

In addition, by updating the band plan to accommodate broadband technologies, public safety agencies would be able to take advantage of commercial off-the-shelf ("COTS")

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[1] *See The Development of Operational, Technical and Spectrum Requirements For Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010,* Eighth Notice of Proposed Rulemaking, 21 FCC Rcd 3668, ¶ 10 (2006) (FCC 06-34) (*"Public Safety Broadband NPRM"*).

[2] Federal Communications Commission, "Report to Congress on the Study to Assess Short-Term and Long-Term Needs for the Allocations of Additional Portions of the Electromagnetic Spectrum for Federal, State and Local Emergency Response Providers," 2005 FCC LEXIS 6907, ¶ 26 (Dec. 19, 2005).

[3] The Spectrum Coalition for Public Safety, "Public Safety Spectrum: How Much Do We Need For Data?" at 3 (Oct. 25, 2005), *available at*: <http://www.spectrumcoalition.dc.gov/img/PS_Whitepaper_10-25-05.pdf>.

equipment, with enormous attendant benefits. As a general matter, the ability to use COTS equipment would enable public safety agencies to take advantage of the lower prices that result from economies of scale and highly competitive markets, as well as having access to a wide choice of technologies, and state-of-the-art equipment. Public safety entities have expressly requested the ability to use COTS.[4]

II. Technological Neutrality Is an Imperative

The High Tech Companies oppose any proposal that would mandate the use of one broadband technology for spectrum designated for wideband use in the Upper 700 MHz public safety allocation. The rules that enable the Regional Planning Committees ("RPCs") to deploy broadband technologies in the band must be technologically neutral, and should not directly or indirectly preclude use of particular broadband technologies.

The Commission has a long-standing policy of technological neutrality, which it has implemented with great success in a number of other bands, including the cellular and PCS bands. In the cellular and PCS bands, the Commission's refusal to select technology winners and losers has led to vibrant competition and innovation in the marketplace. By applying its policy of technological neutrality to the Advanced Wireless Service band, the 700 MHz band, and the 2.5 GHz Broadband Radio Service band, the Commission has laid the foundation for similar competition and innovation. It is particularly important to apply this policy in the Upper 700 MHz public safety allocation, where the beneficiaries of such competition and innovation would be public safety agencies and the public they serve.

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[4] Comments of Region 24 (Missouri) 700 MHz Regional Planning Committee at 6 (seeking flexibility to use COTS equipment as well as multiple technologies using up to 5 MHz of bandwidth); Comments of Region 26 (Nebraska) 700 MHz Regional Planning Committee at 1; Comments of Region 39 (Tennessee) 700 MHz Regional Planning Committee at 2. (Unless otherwise indicated, all comments cited herein were filed in WT Docket No. 96-86 on June 6, 2006.)

Policymakers, including the Commission, consistently have recognized the importance of technologically neutral rules for the Upper 700 MHz public safety allocation. Even before there was such an allocation, the Public Safety Wireless Advisory Committee stated in its 1996 report, "[t]he current approach, focused primarily on continuous narrow banding, does not provide the Public Safety community the flexibility of selecting or obtaining the most efficient technology to meet user-defined needs. Policies should encourage the use of the most spectrally efficient approaches while remaining technology neutral."[5] In 1998, the Commission stated in the First Report and Order in this docket that "the rules we adopt must be as competitively and technologically-neutral as possible to allow for competing equipment designs and to avoid hindering or precluding future innovative technological developments."[6]

There is also widespread agreement among commenters that the 700 MHz band RPCs are best situated to determine the communications needs of the public safety agencies in their individual regions.[7] By maintaining technological neutrality in its rules for broadband in the band, the Commission would enable the RPCs to make the technology choices that best meet the particularized needs of their individual regions. The Commission should not mandate a technology choice and impose it on public safety agencies when the RPCs are better able to work with those agencies to determine the optimal technology solution.

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[5] "Final Report of the Public Safety Wireless Advisory Committee to the Federal Communications Commission and the National Telecommunications and Information Administration," at 3 (Sept. 11, 1996), *available at*: <http://www.ntia.doc.gov/osmhome/pubsafe/PSWAC_AL.pdf>.

[6] *The Development of Operational, Technical and Spectrum Requirements For Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010,* First Report and Order and Third Notice of Proposed Rulemaking, 14 FCC Rcd 152, ¶ 106 (1998).

[7] *See, e.g.,* Comments of the National Public Safety Telecommunications Council at 1; North Carolina State Highway Patrol Brief Comment (June 5, 2006); Comments of Motorola, Inc. at 1; Comments of Dataradio, Inc. at 1.

III. Technological Neutrality Will Be Best Served by a Plan That Accommodates a Pair of 5 MHz Channels for Broadband Technologies

An RPC's ability to select the broadband technology that best meets the needs of its individual region will be limited by the maximum channel size accommodated by the band plan. In order to provide RPCs the greatest flexibility, the Commission should adopt a band plan that accommodates at least 5 MHz of paired spectrum (2 x 5 MHz) for broadband technologies.[8] A pair of 5 MHz broadband channels would provide public safety agencies with access to a broad array of innovative, cutting edge, constantly improving broadband technologies, including, but not limited to, W-CDMA/HSDPA, EV-DO, WiMax, FLASH OFDM, LTE,[9] and other technologies being developed. Adoption of a plan that limits the size of broadband channels to less than 5 MHz would preclude the use of many of these cutting-edge technologies. A band plan that accommodates the larger 5 MHz channels would also accommodate technologies operating on smaller (1.25 MHz) channels, thus providing the RPCs maximum flexibility.

In order to accommodate broadband channels of 5 MHz or more in the Upper 700 MHz public safety allocation, it may be necessary to relocate some of the narrowband channels in the plan of record. The High Tech Companies acknowledge that there may be some obstacles to implementing such a relocation of narrowband channels, including the need to retune 700/800

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[8] The Broadband Optimization Plan achieves the end goal of accommodating at least 5 MHz for broadband technology, and thus we urge the FCC to give this plan careful consideration. Comments of Access Spectrum, L.L.C., Columbia Capital III, LLC, Intel Corporation, and Pegasus Communications Corporation, at 13-14 ("Broadband Optimization Plan").

[9] Long Term Evolution ("LTE") is an evolution path for UMTS that will provide substantial data rate enhancements to support new services and features beyond UMTS technologies, including Wideband Code Division Multiple Access ("W-CDMA") and High Speed Downlink Packet Access ("HSDPA"), which are now being deployed.

MHz radios that have already been deployed. We urge the FCC to work with the public safety community to find a solution to these challenges.

Respectfully submitted,

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